DOCUMENT RESUME

ED 085 950 EC 060 855

AUTHOR	Zelenik, Mary Ella
TITLE	An Annotated Bibliography of Math Materials.
INSTITUTION	University of Southern California, Los Angeles. Instructional Materials Center for Special Education.
SPONS AGENCY	Bureau of Education for the Handicapped (DHEW/OE), Washington, D.C.
PUB DATE	Aug 73
NOTE	52p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	*Annotated Bibliographies; Enrichment; *Exceptional Child Education; Gifted; *Instructional Materials; Learning Disabilities; *Mathematics; Remedial Instruction

ABSTRACT

The selected bibliography provides information on approximately 500 math materials appropriate for students from preschool through high school. Emphasized are manipulative aids, kits, and prepackaged programs. Materials are listed alphabetically by publisher within the following categories: activity cards, audio aids, charts, diagnostic aids, duplicating masters, film media, games and puzzles, kits and prepackaged programs, manipulatives, supplemental texts and readers, teacher references, teaching machines, transparencies and overhead visuals, and workbooks or worksheets. A typical reference includes name of material, publisher and publisher's address, order number (when available), cost (when available), appropriate grade levels and a brief description of the material. Also noted is whether the material requires little or no reading skill, is essentially remedial, is programmed, or is suitable for enrichment purposes. (DB)

ED 085950

AN ANNOTATED BIBLIOGRAPHY OF MATH MATERIALS

by

Mary Ella Zelenik

August, 1973

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRO
DUCED EXACTLY AS RECEIVED FROM
THE PERSON OR ORGANIZATION ORIGIN
ATING IT. POINTS OF VIEW OR OPINIONS
STATED DO NOT NECESSARILY REPRE
SENT OFFICIAL NATIONAL INSTITUTE OF
EDUCATION POSITION OR POLICY

EC 060855

FILMED FROM BEST AVAILABLE COPY

This project was supported in part by a grant from the Bureau of Education for the Handicapped, U.S. Office of Education which is gratefully acknowledged.

The following bibliography is a selected cross-section of math materials available to students in preschool on up to high school. Representative items were chosen for each of the categories listed on the next page with special emphasis placed on manipulative aids, kits and prepackaged programs.

The information has been organized into categories of media format. Within each category the materials listed have been arranged in alphabetical order by publisher. A typical reference would include the following information: name of material, publisher and publisher's address, order number (when available), cost (when available), and a statement describing the material. Appropriate grade levels are listed along the right-hand side of the page next to each reference. The subject matter covered by the resource is underlined. In addition the following notation are included with the grade level notation if appropriate to that material:

(NR) little or no reading skills required
(Re) materials essentially remedial in nature
(P) programmed materials
(S) supplemental for more advanced students, or enrichment materials

SAMPLE:

Name of material — Grade level (initials if they appear)

Publisher

Publisher's address

Order number

Cost

Description

CATEGORIES OF MEDIA FORMAT:

Activity Cards: flashcards, sets of math problems, and math activities which give instructions for simple math experiments in such areas as measurement, volume, etc.

Audio Aids (cassettes and records): pre-recorded lessons and games

Charts

Diagnostic Aids: for determining skill levels

Duplicating Masters

Film Media (films, filmloops and filmstrips)

Games, Puzzles, and Activities

Kits and Pre-packaged Programs: math skills, individual math units, and complete programs; some with manipulative and visual aids, worksheets, etc.

Manipulatives

Supplemental Texts and Readers

Teacher References: for information concerning developing math labs and experiments, and providing individualized instruction

Teaching Machines

Transparencies and Overhead Visuals: those that are sold as complete programs or sets are listed individually, in addition, a number of companies which publish transparencies have been listed.

Workbooks and Worksheets

I. ACTIVITY CARDS:

Self-Instructional Basic Mathematics — 1st-3rd grade

. Electronic Futures, Inc.
57 Dodge Avenue
North Haven, Connecticut 06473
. SIMB

Audio flashcards are structured programs presented in a multi-sensory format for self-instructional or teacher-directed learning activity. This program encompasses the full complement of skills, concepts and abstract principles encountered in the basic mathematics curriculum.

Children Cards Box-Early Learning System — preschool kindergarten

. EDL/McGraw Hill
California Branch Office
5610 Hollywood Boulevard
Hollywood, California 90028
. 312076
. $15.00

These cards display red and blue illustrations of variously proportioned boys and girls: tall and short, fat and thin, etc. They are used in sequences to identify describe, and sort attributes of color, size, shape, and sex.

Geoboard Kit — 1st-6th grade

. Houghton Mifflin
777 California Avenue
Palo Alto, California 94304
. 1-14482
. $3.60

Each kit contains 7"x7" geoboard, assorted rubber bands, and 42 student activity cards, a Teacher's Guide and Answer Book is included. The activity cards guide the students through a series of exploratory activities in which they are led to discover mathematical relationships on their own.

Mathematics Spinner Kit — K-6th grade

. Houghton Mifflin
777 California Avenue
Palo Alto, California 94304
. 1-14473
. $2.85

The Spinner Kit includes a sturdy spinner and 22 Activity Cards containing student activities relating to fractions, geometry, addition, and probability.

Student Activity Cards for Cuisenaire Rods — 1st-5th grade (NR)

. Cuisenaire Company of America, Inc.
12 Church Street
New Rochelle, New York 10805

- 20020
- $9.95

Little reading skill is required for children to use the cards with cuisenaire rods either to supplement exercises in their present mathematics program or as part of their lab materials. Simple pattern work to acquaint children with the rods is followed by games and other problems introducing various math concepts.

Individualized Instruction in Mathematics: Activity Cards — 4th-12th grade

- Houghton Mifflin
  777 California Avenue
  Palo Alto, California 94304
- 2-58700
- $39.00

Consists of a set of individualized activity cards, each set consists of 160 cards separated into 8 sections. 80 different duplicate activity cards. The cards emphasize basic operations a teachers guide accompanies the set.

Retriev-o-math — 7th-12th grade

- Midwest Publications Company, Inc.
  P. O. Box 129
  1700 West Maple
  Troy, Michigan 48084
- $6.00

A mathematical enrichment and motivational device. Many mathematical principles are illustrated. It consists of a series of file cards which present challenging math problems. The table of contents includes: algebra, arithmetic, geometry, logic, number theory, and proof.

Math Mates — K-8th grade

- Learning Research Associates, Inc.
  1501 Broadway
  New York, New York 10036
- Write for costs and order numbers

Math Mates are sets of durable activity cards, illustrated in color and black and white, and designed to be used with the following math manipulatives: Math Balance, Attribute Blocks, Abacus, 100 Number Board, Geostrips, Clinometer, primary shapes, and mosaic shapes. Each set contains 10 cards with each card listing a specific objective or goal and providing numerous motivational activities.

Math Set Geometry — 3rd-8th grade

- Scott, Foresman and Company
  1900 East Lake Avenue
  Glenview, Illinois 60025
- 13550
- $15.00

Beginning in the familiar world of three dimensional objects, the pupil first explores the topic of space shapes. More abstract ideas lead him to plane figures, lines and angles, symmetry and co-ordinates. The sections on fractions and area perimeter and volumne remind him of the close relationship between geometry and arithmetic.

Mathematical Measurement
- Scott, Foresman and Company
  1900 East Lake Avenue
  Glenview, Illinois 60025
- 13548
- $15.00

Designed to develop ideas, skills and relationships in measurement and graphing through a workshop approach. Composed of five topics related to measurement: graphing, measurement of length, area, volume and weight. The cards for each topic are numbered to indicate sequence and further divided and color coded into four levels of difficulty. Teachers manual plus 268 cards per set.

ETA Modern Math: Key-Lab — 1st-2nd grade
- ETA
  159 West Kenzie Street
  Chicago, Illinois 60610
- 1600
- $54.95

A self-corrective teaching and designed to supplement existing mathematics programs. Has problem cards notched to receive only the correct answer, 1,160 problems on 110 cards. Covers numbers, relations, functions and mapping, subtraction, systems of tens and ones, mathematical sentences, operations, number lines, addition, multiplication, sets and vectors. Also 48 spirit masters

Math Applications Kit — 4th-8th grade
- Science Research Associates, Inc.
  259 East Erie Street
  Chicago, Illinois 60611
- 3-545
- $58.85

Students investigate problems using elementary math. There are 270 activity cards that require students to collect and use data to derive conclusions. A supplement to any basal math program and an outstanding addition to math laboratories or learning centers. Components: 270 activity cards, 10 reference cards, a student handbook, a Teacher's Manual and an almanac.

II. AUDIO-AIDS

Fountain Valley Teacher Support System in Mathematics — K-8th grade
- Richard L. Zeweig, Associates, Inc.
  20800 Beach Boulevard
  Huntington Beach, California 92648

. Write for price and order number

The program is a comprehensive, prescriptive teacher support system in mathematics. The tests, covering 785 behavioral objectives, are self-administered on audio tape in 8 to 20 minute segments. They provide immediate knowledge of results, meaningful diagnostic patterns and identify specific deficiencies. Prescriptions are cross-indexed to virtually every major mathematics text and audio-visual program in the country for grades K-8. Includes Teacher's Manual.

Telling Time — 1st-3rd grade

. Encyclopedia Britannica Educational Corporation
425 North Michigan Avenue
Chicago, Illinois60611
. 6610
. $89.00

This program consists of four 15-minute lessons that teach a child the necessary key concepts and skills for telling time. The materials are a complete teaching unit, utilizing audio instruction and manipulative materials. Includes: 1 filmstrip, a cassette, pupil worksheets, teacher/pupil book, and a model clock face.

Programmed Mathematics Cassettes — 1st-3rd grade (P)

. Mafex Associates, Inc.
111 Baron Avenue
Box 519
Johnstown, Pennsylvania 15907
. 110900 math readiness
111000 math grade I
111100 math grade II
111200 math grade III
111300 math grade IV
. $60.00 each

A teacher-tested sequential series of programmed math taped lessons that can be administered with a minimum of preparation time-it can be used in a remedial math program by simply dropping down to the appropriate achievement level of a pupil. A pupil worksheet accompanys each lesson.

Discovering Number Facts — K-2nd grade

. Learning Media Corporation
231 North 63rd Street
Philadelphia, Pennsylvania 19139
. $36.80

This series of 8 cassettes introduces numbers and numerals to children, simple tunes and narration are mixed to make these a delightful and informative learning experience. Each cassette is 6 minutes long and is useful for both classroom and individual study.

Math Mastery Tapes — 2nd-8th grade

. Learning Research Associates, Inc.

1501 Broadway
New York, New York 10036
- MNN600 unit I
  MFC720 unit II
- $168.00-unit I-Numerals and Narration
  $90.00-unit II-Introduction to Graction Concepts

Each unit consists of lessons within a general area of mathematics. designed to complement traditional and modern approaches. Beginning lessons deal with simple skills and concepts that are further developed in each successive lesson. The student works independently listening to tapes, recording and checking his answers in the Work-Study Guides.

Learning Systems: Mathematics
- Electronic Futures Inc.
  57 Dodge Avenue
  North Haven, Connecticut 06473
- C-1000 can order individual kits for each grade level
  R-1000
- $795.00

The minisystem is primarily for use by the individual student under the guidance of the teacher. Each minisystem consists of an audio tape containing an instructional sequence and an activity sheet. The opportunities for student response to questions and problems posed on the tape is designed to teach the concepts and operations basic to the school mathematics program.

Modern School Mathematics 1st-6th grade
- Houghton Mifflin
  777 California Avenue
  Palo Alto, Californai 94304
- 1-5101 (primary)
  1-5151 (intermediate)
- $240,00, $285,00

For teaching review, 10-20 minute cassettes providing individualized units in mathematics can be used successfully with any elementary modern math program. 32 lessons in primary and 40 in the intermediate. Accompanying each lesson is a 4-page student worksheet. Each section also includes Teacher's Guide with notes for each lesson. Behavioral objective, follow-up activities and back sound material.

Practice Tapes for Modern School Mathematics
- Mathematics Algebra I
  77 7 California Avenue
  Palo Alto, California 94303
- $114.00

A complete package contains 27 audio-tape cassettes, (2 lessons-per. cassette), accompanied by 2 lesson booklets of, 110 pages each. Each of the 54 lessons covers a specific topic in the textbook and provides an explanation of the topic. The listening time for the average tape is 8-12 minutes.

Fractions and Fractional Numbers/a Self Instructional Multi-Sensory Approach — 3rd-6th grade

- Special Education Materials, Inc.
  484 South Broadway
  Yonkers, New York 10705
- SE 2210
- $60.00

A multi-media, self instructional program which combines auditory, visual, and kinesthetic experiences to reinforce the concept of fractions and fractional numbers. Program consists of 10 pre-recorded lessons on cassette tapes; fractions discs to represent subject fractions, plastic trays to hold fraction pieces, and ten packs of 72 response sheets for each item.

Primary Math Skills Improvement Program — 1st-3rd grade

- Special Education Materials, Inc.
  484 South Broadway
  Yonkers, New York 10705
- SE 2212
- $339.00

This program builds pupil proficiency in math. The series includes 40 pre-recorded tapes, 30 student response booklets for each tape, 3 copies of the Teacher's Manual and a placement test kit. A variety of highly motivating individualized exercises reinforce and extend fundamental math concepts.

Computapes — 4th-8th grade

- Science Research Associates, Inc.
  259 East Erie Street
  Chicago, Illinois 60611
- 3-12000
- $380.00 (can be ordered individually)

This supplementary program consists of a series of cassette tapes for practice in basic math skills. The 56 cassettes contain 112 lessons, each 10 to 20 minutes long. Tapes are in six modules-addition and subtraction A and B, Multiplication and Division A and B, Fractions, Decimals, and Percents. Tapes are organized by skill area rather than grade level. Worksheets for every lesson. All Available in spirit masters or in perforated workbooks.

Mathtapes TM Audiotape Program — 7th-9th grade

- Science Research Associates, Inc.
  259 East Erie Street
  Chicago, Illinois 60611
- 21-10300 reel format
  21-10370 cassette format
- $486.00 reel
  555.65 cassette

The program is divided into eight units to help introduce, reinforce, and provide practice in math. A program for average or below average students. The first unit provides remedial practice and review of basic arithmetic. Other units are on mathematical systems, concepts, and operations of algebra ratios and percents, numeration systems, geometry and problem solving. Correlated to 12 major lower-track and middle-track text books.

Math Made Meaningful — K-6th grade

- Stanley Bowmar Company, Inc.
  Valhalla, New York 10595
- (82.1005 (k-and), 82.1017 (2-3) 82.1040 (5-6)
- $4.98 each

Vol I-Games and activities which introduce basic number concepts
Vol II-games and puzzles teach fundamental arithmetic concepts
Vol III-Activities are presented which review the basic arithmetic concepts of addition and subtraction. Concentration of development of multiplication and division facts.

III. CHARTS

Elementary Mathematics Charts

- Nystrom
  3333 Elston Avenue
  Chicago, Illinois 60618
- EM-80
- $95.00

Size 18½ x 24 inches, a set of 80 colorful charts with bright, humorous pictures. Some examples include: 4 money charts, 6 time charts; 13 number charts, on set theory, theory of numbers, and order; geometry; measuring; graphs; number line.

IV. DIAGNOSTIC AIDS

Pre-math (Part of Apell Early Learning Kit) — preschool-1st grade

- Edcodyne Corporation
  Suite 935
  1 City Boulevard West
  Orange, California 92668
- AP701 (entire kit)
- $330.00

It diagnoses skill levels based on specific measurable performance objectives and suggests possible remediation. Pre-math assesses skill in discrimination of attributes (size) and number concepts. Includes: Student Booklets, Teacher's Editions, Student Response Forms, Computer Processing Index, Student Reports.

Fountain Valley Teacher Support System in Mathematics — K-8th grade

. Richard L. Zweig, Associates, Inc.
  20800 Beach Boulevard
  Huntington Beach, California 92648
. Write for price and order number

The program is a comprehensive, prescriptive teacher support system in mathematics. The tests, covering 785 behavioral objectives, are self-administered on audio tape in 8 to 20 minute segments. They provide immediate knowledge of results, meaningful diagnostic patterns and identify specific dificiencies. Prescriptions are cross-indexed to virtually every major mathematics text and audio-visual program in the country for grades K-8. Includes Teacher's Manual.

Diagnosis: An Instructional Aid - Mathematics — 1st-6th grade

. Science Research Associates, Inc.
  259 East Erie Street
  Chicago, Illinois 60611
. Write for prices

This instructional aid is for pinpointing mastery of concepts and skills covered by major math programs. It utilizes criterion-referenced diagnostic math tests called probes. The back of each probe lists learning objectives for questions students miss. Components: consumable copies of probes, consumable copies of the survey test, a prescription guide, class progress wall chart, and Teacher's Guide.

V. DUPLICATING MATERIALS

M.W. Sullivan Duplicating Masters, 1,2 — 1st-7th grade

. Behavioral Research Laboratories
  Box 577
  Palo Alto, California 94302
. 6375 (books 1-4)
  0376 (books 5-7)
. $39.95 (books 1-4)
  39.95 (books 5-7)

Two books of duplicating masters, each containing 200 master worksheets correlated with M.W. Sullivan Mathbooks.

Playing With Numbers — Kindergarten

. Continental Press, Inc.
  2085 East Foothill Boulevard
  Pasadena, California 91109

Twenty four plates with free teacher's guide.

VI. FILM MEDIA (FILMS, FILMLOOPS, FILMSTRIPS)

The World of Whole Numbers

. BFA Educational Media

2211 Michigan Avenue
Santa Monica, California 90404
. 393000
. $8.00 each filmstrip
$40.00 series of 5

Titles: The Missing Addend, Bowler's Mathematics, Sporting Mathematics, The Missing Factor, The Doughnut Stand. Through participation in a series of bizarre baseball, football, and bowling events as well as through marketing activity, the student reviews number facts and practices basic number operations.

Exploring New Math — K-6th grade
. Learning Media Corporation
231 North 63rd Street
Philadelphia, Pennsylvania 19139
. $78.00

The objective of this series of filmstrips is to introduce and teach the principles of new math. Each filmstrip introduces a new concept while repetition reinforces skills and principles already learned, building a strong foundation of working with numbers, problems and principles.

Learning Readiness in Math — preschool-2nd grade
. Learning Media Corporation
231 North 63rd Street
Philadelphia, Pennsylvania 19139
. $50.00

This series of four sound filmstrips is directed at preparing the child for an understanding of number concepts. Counting and an understanding of the meaning of numbers are presented in an amusing and fun-filled light. Titles include: Discovering Numbers, I Like to Count, We Count Many Things, Using Numbers and Letters.

Arithmetic Series — 1st-5th grade
. Webster/McGraw Hill
8171 Redwood Highway
Novato, California 94947
. Write for price list, there are 3 primary sets and 3 elementary sets

The arithmetic series will be a major assistance in clarifying some of the major whole-number concepts commonly covered in the elementary school. The series is designed as a valuable complement to previous instruction and is not intended to serve as a means of introducing the concepts involved. The filmstrips deal with elementary whole number concepts, properties, and operations and are designed for review, summary, or remedial work.

Modern Geometry Series — 7th-12th grade
. Webster/McGraw Hill
8171 Redwood Highway
Novato, California 94947

. 671325-set 1
  671335-set 2
  405475-set 3
. $49.00 per set

This series of filmstrips introduces, develops and summarizes some of the basic and most important concepts of modern geometry. Classical geometric proofs are given, but at the same time students are encouraged to participate in class discussion and to take an active part in solving problems and in finding proofs.

Modern Algebra Series — 7th-12th grade

. Webster/McGraw Hill
  8171 Redwood Highway
  Novato, California 94947
. 619220
. $49.00

Six color filmstrips help visually clarify some of the more difficult topics in high school Algebra. Incorporating new content and new approaches to the teaching of this subject, this series is designed to meet the challenge of today's modern mathematics programs.

Macmillan Elementary Math Film Loops — K-8th grade

. Macmillan Publishing Company, Inc.
  200 F Brown Street
  Riverside, New Jersey 08075
. Write for order numbers and prices

A complete set of single-concept filmloops in mathematics--40 in all. The films are compatible with any new mathmatics program. Each filmloops is accompanied by a guide sheet for the teacher which includes synopsis of film, related filmloops, ideas for use of the film, exercise and follow-up activities.

Films on Mathematics for the Elementary School-First Level Series — 1st-6th grade

. Review Educational Films, Inc.
  440 Conil Way
  Menlo Park, California 94025
. $1,250.00 for 10 films

The series of ten 16mm films introduces math experiences without requiring mastery, and is largely concerned with size, shape and number of objects. Sample titles include: What is 1,2,3,4 and 5?, Addition Facts 1-10, Subtraction of 1-5, What is 6,7,8,9? What is 10?, More About 10, Numbers 11-19.

Geometry and Trigonometry — 7th-12th grade

. Popular Science Audio Visuals, Inc.
  Times Mirror
  5235 Ravenswood Avenue
  Chicago, Illinois 60640
. C-202 (8 filmstrips)
. $50.00 ($6.75 each)

These filmstrips draw together the facts students have been accumulating and add meaning by explaining the reasons behind them. They are useful in review and in presenting new or difficult topics. Titles include: Applied Geometry, Complementary and Supplementary Angles, Congruence, Right Angles in 3-Dimensional Figures, Tangents to Circles, The General Angle and Indirect Measurement.

Algebra and Related Topics — 9th-12th grade

. Popular Science Audio Visuals, Inc.
Times Mirror
5235 Ravenswood Avenue
Chicago, Illinois 60640
. C-701 (10 filmstrips)
. $62.50 ($6.75 each)

These filmstrips draw together the facts students have been accumulating and add meaning by explaining the reasons behind them. They are useful in review and in presenting new or difficult topics. Titles include: Introduction to Complex Numbers, Finding Equations of Lines, Mathematics of Motion, What Numbers Properties Signify, Permutations Solving Radical Equations.

Fundamentals of Modern Mathematics — 3rd-6th grade

. Jam Handy School Service
2781 East Grand Boulevard
Detroit, Michigan 48211
. 3150
. $69.95 ($7.50 each)

Ten filmstrips with operations and principles visually demonstrated with the help of on-screen assistance. Each filmstrip is designed to help students discover mathematical ideas themselves through guided discussion and questions. Titles include: Sets and Set Operations, The Whole Numbers, The Integers, The Rational Numbers, Relations, Functions, Finite Mathematical Systems, Shapes, Areas.

Introduction to Fractions — 3rd-6th grade

. Jam Handy School Service
2781 East Frand Boulevard
Detroit, Michigan 48211
. 1030
. $26.25 ($5.75 each)

These 5 filmstrips present the beginning concepts of fractions. The treatment of the subject matter is designed especially for the grades where fractions are commonly introduced. Titles include: Fractional Parts of a Whole 1/2, 1/3, 1/4; Fractional Parts of Groups 1/2, 1/3, 1/4; Fractional Parts of a Whole and Groups 1/5, 1/6, 1/8; Non-unit Fractions of a Whole and Groups, Comparing Fractions.

Using Sets and Numbers — 6th-8th grade

. Jam Handy School Service
2781 East Grand Boulevard
Detroit, Michigan 48211
. 1000
. $57.55 ($6.25each)

Ten color filmstrips to provide students with important insights into fundamental set concepts, offer students practice in using set concepts as an approach to mathematical success, show students the relationship between sets and numbers, and lay a foundation for advanced math study. Titles include: Introduction to Sets, One-To-One Correspondence, Ordering Sets and Numbers, Basic Subsets and the Empty Set, Set Description and the Use of Braces.

Mathematics for Primary Grades — 1st-3rd grade

- Jam Handy School Service
  2781 East Grand Boulevard
  Detroit, Michigan 48211
- n020
- $43.75 ($5.95 each)

Eight color filmstrips acquaint young children with our number system and its importance in solving everyday problems. Beginning understandings of basic mathematical processes are shown in classroom situations. Titles include: Story of Numbers, Comparing Sizes, Matching Numbers, Grouping Numbers, The Meaning of Numbers 1 -10, What One-half Means, Measuring How Long, Measuring How Much.

Primary Mathematics 1: Geometry

- QED Productions
  P. O. Box 1608
  Burbank, California 91505
- $95.00 filmstrip and records (33 1/3 rpm)
- $109.50 filmstrips and cassettes

The packet includes 6 filmstrips, 6 33 1/3 rpm records and 6 cassettes, Teacher's Manual, and student activity book (20 spirit duplicator masters). Two delightful characters, Pam and Freedy, introduce primary students to the fun-filled world of geometry through discovery. The series is illustrated in a fresh, graphic art style. The series is constructed to stimulate the young viewer to immediate verbal and tactile response through a progression of questions and problems which can be answered or solved within the filmstrips time span.

Modern Mathematics

- Stanley Bowmar Corporation, Inc. — 9th-12th grade
  Valhalla, New York 10595
- 9422
- $45.00 set of 6 filmstrips

Designed to introduce and develop some of the basic concepts of set theory as they relate to secondary school mathematics.

Mathematical Insights — 3rd-8th grade

- BFA Educational Media
  2211 Michigan Avenue
  Santa Monica, California 90404
- 3H2000
- $8.00 each filmstrip
  $80.00 series of 10

Includes decimals, percents, ratios, fractions. Interesting stories about everyday activities help to learn the concepts about fractions.

What is a Fraction? 3rd-8th grade

. BFA Educational Media
  2211 Michigan Avenue
  Santa Monica, California 90404
. 3L800 4 filmstrips, 2 records
  3L900 " 2 cassettes
. $42.00
  46.00

Increases the viewer's understanding of fractions and their properties. Discovery and understanding, rather than rate memorization, is the objective. Titles include: Numerators and Denominorators, Equivalent Fractions, Finding Common Denominators, Improper Fractions and Mixed Numbers.

Math Manipulatives Series 1st-5th grade

. BFA Educational Media
  2211 Michigan Avenue
  Santa Monica, California 90404
. $20.00 each

Series of 10. Encourages the young student to explore the world of mathematics through use of manipulatives. Titles include: Properties of Shapes, One-to-One Correspondence, Shapes and Positions, Sets and Sizes, Union of Sets, Addition by Grouping-Association, Subtraction as Set Separation, Addition by Grouping.

Primary Mathematics 1st-3rd grade

. Denoyer-Geppert Audio Visuals
  6112 South Candon Avenue
  Los Angeles, California 90056
. Write for specific titles, numbers, and costs

Filmstrips on measurement, time and dividing into parts.

Modern Arithmetic 1st-6th grade

. Stanley Bowmar Company, Inc.
  Valhalla, New York 10595
. Write for order numbers and costs

Four sets of filmstrips introduces basic math concepts appropriate to each grade level.

Arithmetic for Beginners preschool-K

. Stanley Bowmar Company, Inc.
  Valhalla, New York 10595
. 9958X
. $866.00

Primary set of 11 filmstrips (may be ordered separately) designed as readiness material. SeriesI-Number Readiness, Series II-Number Concepts.

Modern School Mathematics: Single Concept Filmloops 1st-3rd grade

. Houghton Mifflin
  777 California Avenue
  Palo Alto, Californai 94304
. 1-15000 technical cartridge
  1-15001 kodak cartridge

. $445.50

Full-color, animated filmloops. Present and develop basic mathematical concepts. The set can be used to introudce and review basic concepts.

Seeing the Use of Numbers — 1st-8th grade

. Eye-Gate House
4848 McConnell Avenue
Los Angeles, California 90066
. Write for order numbers and prices

Eight sets of filmstrips covering: Counting, Number Relations, Addition, Subtraction, Multiplication, Division and Fractions--Primary.
Uneven Division, Fractions and Measures, Extended Mathematical Concepts--Elementary.
Square Root, Geometry, Beginning Algebra--Elementary and Intermediate.

Fables of Numbers and Shapes — preschool-1st

. Eye-Gate House
4848 Mc Connell Avenue
Los Angeles, California 90066
. TF243
. $55.50

The use of a story book form and imaginative characters provides teachers with a self-explanatory complement to most math curricula. This set practices the theory of fun teach. The emphasis is on getting the student interested in playing with numbers and shapes to prepare his mind for working with them later.

Work and Play with Numbers — 1st-3rd grade

. Eye-Gate House
4848 McConnell Avenue
Los Angeles, California 90066
. F27
. $48.50

The major objective of these filmstrips is to give the child the main number concepts in the initial study of arithmetic. The child sees, hears, reads and talks about numbers. Complete set of 9 captioned color filmstrips with Teacher's Manual.

Solving Word Problems in Mathematics — 1st-3rd grade

. Eye-Gate House
4848 McConnell Avenue
Los Angeles, California 90066
. TX 329
. $52.00

This set (6 color filmstrips and 3 cassettes) teaches the student the skills of reading and understanding the problem, writing the number sentence, and solving the number sentence and to translate his solution into a verbal form. Compatible with current modern mathematics texts and programs.

Plane Geometry 7th-12th grade

. Eye-Gate House
  4848 McConnell Avenue
  Los Angeles, California 90066
. F5-2
. $57.00

To help teach the more difficult geometric concepts. Not planned as an initial presentation, the concepts lead the student further along after the initial introduction to geometry, forming an excellent foundation for analytical geometry and differential calculus.

Mathematics in Action 7th-9th grade

. Eye-Gate House
  4848 McConnell Avenue
  Los Angeles, California 90066
. F5-1
. $51.00

Adaptable to both modern and traditional curricula, these filmstrips have been designed to serve as an aid in the presentation of certain pre-algebra mathematical topics. Every effort has been made to make the material sequential and logical without being programmed. Complete set of 8 captioned color filmstrips and Teacher's Manual.

Topics in Algebra 7th-12th grade

. Eye-Gate House P
  4848 McConnell Avenue
  Los Angeles, California 90066
. TX328
. $58.00

Programmed presentation will enable the student to discover the principles that underlie key algebraic manipulations. Every topic is developed as a progression that leads to the students non proof of the validity of each method. Follow-up drills are included in the Teacher's Guide A complete set of 6 color filmstrips with 3 cassettes.

Arithmetic for Beginners Series II K-1st grade

. Encyclopedia Britannica Educational Corporation
  425 North Michigan Avenue
  Chicago, Illinois 60611
. 9020
. $30.00
  $6.00 each

Series II presents varied opportunities for children of primary grades to achieve understanding and proficiency in the handling of number concepts such as time, size, quantity, and simple addition and subtraction. Suggestions for supplement activities are included. Five filmstrips: The Tea Park, Duck Eggs, The Circus, The Storekeepers, Roy's Number Friends.

Exploring New Math K-5th grade

. Troll Associates

320 Route 17
Mahivah, New Jersey 07430
. $91.00

A complete unit of 13 filmstrips to introduce and teach children the principles of new math. Entertaining lively illustrations help children discover basic concepts and master skills. Each filmstrip develops a concept step by step. Titles include: Introduction to Sets, Member of Sets, Mathematical Relationships, Counting Numbers and Whole Numbers, Addition, Subtraction, More Sets, Number Line, Addition and Subtraction, Fractions, Place Value, Multiplication, and Division.

New Mathematics — 1st-3rd grade

. Educational Projections Corporation
P. O. Box 1187
Jackson, Mississippi 39205
. $6.00 individual filmstrips

A series of 36 full color filmstrip lessons for grades 1, 2, and 3 covering the basic principles of new math.

Modern Math Multimedia Program — 1st grade

. School Produce Division
David C. Cook Publishing Company
Elgin, Illinois 60120

Combines color filmstrips with cassette tapes to help first-graders learn basic concepts of modern math. Includes: Cassette player, 5 tape cassettes (each with 2 lessons), 10 color filmstrips, and a Teacher's Guide.

Basic Mathematics — 4th-8th grade

. Enrich
3437 Alma
Palo Alto, California 94306
. E00-M
. $49.95

Twenty filmloop cartridges covering sets, number and numeration, addition and subtraction, multiplication, division and rational numbers, fractions-understanding primes and divisibility, addition and subtraction and multiplication and division, preparation for geometry.

Basic Arithmetic — 1st-3rd grade

. Enrich
3437 Alma
Palo Alto, California 94306
. E00-A
. $37.50

Fifteen filmloop cartridges designed to provide drill and review in addition, subtraction and multiplication of whole numbers. Filmloops are in color.

Multi-media Math Program — 1st-3rd grade

Re

. Educational Materials Company
1553 South Victory Boulevard
Glendale, California 91201
. $35.00

Low level skill development for the under achieving student. Uses colorful filmstrips and narrated cassettes with sound effects. Addition and multiplication programs are highly sequential allowing the teacher the opportunity to individualize the basic math programs. Also includes pre and posttests and teacher's manual.

Kenner on Modern Mathematics — 1st grade
. Stanley Bowmar Company, Inc.
Valhalla, New York 10595
. Write for order number and costs.

A new series by Kenners of Southern Illinois University. These sets can be used in the 1st grade or when you wish to introduce the concepts covered. Gerry Graph, a whimisical animal learns, demonstrates and sometimes fumbles in a charming narrative. Total set contains 36 filmstrips.

VII GAMES, PUZZLES, AND ACTIVITIES

Math Matrix Games — K-1st grade
. Appleton Century Crofts-Educational Division
440 Park Avenue South
New York, New York 10016
. Order No. T 37770-8
. $58.00

Provides controlled game situations in which children learn to listen, to verbalize, to solve problems, and give and follow directions. Teaches math concepts of counting 1-10, 10-0; matching number 1-10; order and sequence; introductary addition and subtraction. Magnetic display frame, 20 colorful illustrated game boards in convenient carrying case, 16 magnetic numerals and shapes, Teacher's Manual.

Sullivan Math Games — 1st-6th grade
. Behavioral Research Laboratories
Box 577
Palo Alto, California 94302
. 2675
. $49.95

1. Hainstock Blocks-manipulative device teach number and numeral, digits
2. Rithmetic-subtraction practice
3. Number Place Strips-to read numbers, digits to 1,000, place value and 0
4. Abacus
5. Mathematical Checkers
6. BRL Equation Cards
7. Sullivan Math Cards
8. Number Sentences Game
9. Line Designs

Ordinal/Cardinal Puzzles — preschool-1st grade

Developmental Learning Materials — preschool-1st grade
7440 North Natchez Avenue
Niles, Illinois 60648
. 204
. $4.00

Set of 11 puzzles, each divided into three pieces. The puzzle placement is self-instructive. For example, a puzzle piece related to 5 can fit only the other pieces of the 5 puzzle. However, the cut of the puzzle is not so obvious that the student can rely on that alone to match the puzzle. $7\frac{1}{2} \times 3\frac{1}{2}$" puzzles, mounted on superboard and boxed with instructions.

Plus for Mathematics
. Educational Service, Inc.
P. O. Box 219
Stevensville, Michigan 49217
. $4.60

Each classroom tested activity includes a description of all necessary materials and preparations, and an example of exactly how the activity may be presented.

Mathfacts Games — 1st-3rd grade
. ESSCO Educational Supply Company, Inc.
2823-25 East Gage Avenue
Huntington Park, California 90255
. 7642
. $15.00

A chest of 5 self-instruct onal, self checking games with the learning of basic addition and subtraction. Each game covers a different set of facts and is graded in levels of increasing complexity. Designed to provide small group drill or may be played solitaire.

Modern Math Games, Activities and Puzzles — any level
. Fearon Publishers
Lear Siegler, Inc--Education Division
6 Davis Drive
Belmont, California 94002
. $2.00

All materials can be easily adapted to any level of mathematical maturity. Games, activities and puzzles for enrichment, reinforcement and seatwork. On perforated paper so that spirit duplicator masters can be made from them.

Math Series, Elementary Kit — 3rd-5th grade
. James E. Kutz and Associates, Inc.
P. O. Box 140
McLean, Virginia 22101
. AGDP101
. $150.00

Prepackaged kit includes: 10 games, 40 tests and rating charts, all operational levels listed on back, Teacher's Manual and storage box.

Math Series, Intermediate Kit — 4th-8th grade

- James E. Kutz and Associates, Inc.
  P. O. Box 140
  McLean, Virginia 22101
- AGDP101-1
- $110.00

Prepackaged kit includes: 10 games, 40 tests and rating charts, math operations for fourth through eight grades, Teacher's Manual, and storage box.

Math Series, Primary Kit — 1st-3rd grade

- James E. Kutz and Associates, Inc.
  P. O. Box 140
  McLean, Virginia 22101
- AGDP-101-P
- $110.00

Prepackaged kit includes: 10 games, 40 tests and rating charts, math operations for first through fourth grade, Teacher's Manual and storage box.

Franklin Mathematics Series — 1st-8th grade

- Lyons and Carnahan
  Educational Division, Meridith Corporation
  407 East 25th Street
  Chicago, Illinois 60616
- Write for price list

This math series is filled with problems that draw on imagination and common sense, the books take students through a whole fascinating series of activities, projects, puzzles and games. Sample topics include: learn to fold, mirror magic, patterns and puzzles in mathematics.

Coordinated Cross-Number Puzzles — 2nd-9th grade

- McCormick-Mathers Publishing Company
  300 Pike Street
  Cinannati, Ohio 45262
- Write for order numbers
- 63¢ per student copy
  99¢ per teacher copy

Series of 6 consumable books, with puzzles which help students develop competence in the operations of mathematics. Each book contains hundreds of problems of all types that can be used for challenging practice material or for remediation.

Math Activities With Simple Equipment — NR

- Midwest Publications Company, Inc.
  P. O. Box 129
  Troy, Michigan 48084
- Text-$5.95
- Teachers Manual - $1.00

S
Re

All activities are rated by reading level (no read, low read, medium read, high read). Age and grade levels are not identifiable by the student. The games, puzzles and other activities can be used in a classroom that may be traditional or open math laboratory.

Ranko — 3rd-12th grade

- Midwest Publications, Inc.
  P. O. Box 129
  Troy, Michigan 48084
- $11.95

Game for 2-4 players wsing a deck of 48 cards. There are four such decks of increasing difficulty. The object of the game is to get 8 cards in ranking order in a rack. Ranko encourages students to think that a number can be represented by many numerals. For example 16, $(2^2)^2$, and 31_{five} all are used for the number 16.

Orbiting the Earth — 1st-8th grade

- Scott, Foresman and Company
  855 California Avenue
  Palo Alto, California 94304
- Write for order numbers and costs.

Four separate games: Addition, Subtraction, Multiplication, and Division. After tossing numeral blocks and correctly stating the basic fact called for, students may move markers from space station to space station. Each game includes a colorful 26" square vinyl playing filed, numeral blocks, disc markers and complete instructions. For 2-6 players or teams.

Multi-decks — 3rd-5th grade

- The Teachers Desk
  P. O. Box 305
  Healdsburg, California 95448
- $3.50

Teaches students to multiply while playing a game. There are 144 blue cards with rules for 4 easy card games. Multiplicards are presented in logical order with products printed only in countable sets of squares.

Numerical Baseball — 1st-3rd grade

- The Teach-um Company
  Box 4232
  Overland Park, Kansas 66204
- NB-2
- $2.50

A classroom aid which encourages all children to be successful in math. Through competitive fun even disinterested children strive to answer problems in addition, subtraction, multiplication and division. Numerical Baseball may be played quietly during class by two or several may play.

Operational Systems Games — 4th-12th grade

. Webster/McGraw Hill
  8171 Redwood Highway
  Novato, California 94947
. 07-061130-0
. $12.95

This kit of games represents concrete models for abstract math concepts. It contains game surfaces, playing pieces, and playing aids which enables students to play hundreds of mathematical systems games. Includes: 8 four-color playing surfaces, 120 playing pieces, 4 table cards, 2 circular slide rules and 1 instruction manual.

VIII KITS AND PREPACKAGED PROGRAMS

Math Modules — K-6th grade

. Appleton Century Crofts
  440 Park Avenue South
  New York, New York 10016
. Complete program $399.00

Individualized, ungraded, student-oriented modern math program. Eight learning areas: Numeration/Place Value; Addition/Subtraction; Multiplication/Division; Fractions/Decimals; Geometry; Special Topics; Measurement; in 7 ability levels or modules. Each skill taught in a separate booklet. Includes placement and pretests.

Readiness in Math — preschool-1st grade

. Behavioral Research Laboratories
  Box 577
  Palo Alto, California 94302
. 0230
. $49.95

Teacher-administered, Calling for request responses. Children learn by discovery. They learn to recognize sets 0-9 numbers, add and subtract up to 9. Materials: demonstration book, nine 6x8" die-cut number cards, number chart, teachers manual.

Sullivan Basal Mathematics Program — 1st-6th grade NR

. Behavioral Research Laboratories
  Box 577
  Palo Alto, California 94302
. 0306-0342-$1.99 each
  0343-0351-prices vary

Presented without use of the written word. Learn addition, subtraction, multiplication, division of whole numbers, fractions and decimals. Materials: 37 textbooks (0306-0342), Teacher's Record Book (0349), Student's Record Book (0350), and giant page-display (0351).

Sullivan Mathematics Kits — 1st-6th grade P

. Behavioral Research Laboratories
  Box 577
  Palo Alto, California 94302
. 0360-0365

. $5.96 per kit (6 kits)

For strengthening the Computational Skills of math students. Each kit contains: Teacher's Manual, test key, Giant Page, and three programmed textbboks.

Math Lab — 5th-8th grade

. Benefic Press
Wroman's
2995 East Foothill Boulevard
Pasadena, California 91109
. 099895
. $17.25

Contains 315 discovery type activities to expand the understanding and appreciation of math concepts in fractions, geometry, graphing, measurement, and number fun. Each section ranges in difficulty from primary level through junior high.

System 80: Learning Number Facts — K-4th grade

. Borg-Warner Educational Systems
7450 North Natchez Avenue
Niles, Illinois 60648
. $150.00

Devises interesting and meaningful practice 92 audio-visual lessons. May be used in conjunction with any basal elementary mathematics program. Includes pre and posttests.

Arithma Think — preschool-3rd grade

. Comspace Corporation
350 Great Neck Road
Farmingdale, Long Island, New York 11735
. $29.95

Teaches counting, addition, subtraction, multiplication, division and logical thinking. Teaches logic of arithmetical operations in a game-like fashion. The child sees a problem on paper and solves it by physically performing mathematical operations using colored pegs and cut-outs. Included in price: 6 workbooks, 4 arithmetical programs with 48 math problems that attach to the machine, 1 parent's manual, 1 teacher's manual.

Cyclo-Teacher: Intermediate Math Cycles — 4th-6th grade

. Department CMD-CTS
Field Enterprises Educational Corporation
Mechandize Mart Plaza
Chicago, Illinois 60654
. CT-2012
. $15.50 (doesn't include Cyclo teacher device)

Each cycle is a complete instructional unit on either one or two study wheels. Require from 15 to 45 minutes to complete. Includes: addition, subtraction, division, multiplication, sets, numeration, beginning geometry, fractions and beginning algebra.

Learning Systems: Mathematics — K-6th grade

- Electronic Futures, Inc.
  57 Dodge Avenue
  North Haven, Connecticut 06473
- C1000 or may order for each grade level
  R1000
- $795.00

The minisystem is primarily for use by the individual student under the guidance of the teache . Each minisystem consists of an audio tape containing an instructional sequence and an activity sheet. They provide apportunities for student response to questions and problems posed on the tape. It is designed to teach the concepts and operations basic to the school mathematic program.

Measurement Skills — 1st-3rd grade

- Encyclopedia Britannica Educational Corporation
  425 North Michigan Avenue
  Chicago, Illinois 60611
- 6640
- $58.75

Based on the audio tutorial method of instruction presents inches and fractions and centimeters and decimals. Both kits in the set contain color filmstrip, cassette, game card, pupil practice pad, Teacher's Guide, ruler, and magnifying glass. These materials utilize a multifaceted approach which involves individual student, and large group participation and teacher participation.

Telling Time — 1st-3rd grade

- Encyclopedia Britannica Educational Corporation
  425 North Michigan Avenue
  Chicago, Illinois 60611
- 6610
- $89.00

This program consists of four 15 minute lessons that teach a child the necessary key concepts and skills for telling time. The materials are a complete teaching unit, utilizing audio instruction and manipulative materials. Includes: 1 filmstrip, a cassette, pupil worksheets, teacher/pupil book, and a model clock face.

Math Test Kit — 1st-3rd grade

- Enrich
  3437 Alma Street
  Palo Alto, California 94306
- ERS-1
- $5.95

Resource material for the busy teacher. The kit helps to extend, enrich and improve student's math skills. For independent study and special studies. Kit includes: (15) 2 sided Tangram task cards, (5 sets) die cut Tangram pieces, (18) open ended task cards for weekly math labs-measuring, counting, etc., (19) 2 sided geoboard task cards.

Unifix Mathematics Kit — preschool-3rd grade

- ETA
  159 West Kinzie Street
  Chicago, Illinois 60610
- 120-4
- $95.00

For teaching basic mathematical concepts. The system is based on unit interlocking cubes which are used with a variety of racks, trays, boxes and holders also supplied inthe kit. Also includes number cards, inset pattern board, number association cards, scan window makers, two-way bead stair, number pole, teacher's manual and much more.

ETA Primary Number Concept Kit — preschool-1st grade

- ETA
  159 West Kinzie Street
  Chicago, Illinois 60610
- 122X
- $50.00

For individual work. A selection of colorful and attractive materials designed to hold the attention of the very young while working on first numbers. Includes: matching strip book, all about 10-strip book, number sorting cards, ETA interlocking cylindrical units, ETA real things profile, and ETA everyday object counters.

Modern School Mathematics: Structure and Use, revised eidtion — Kindergarten

- Houghton Mifflin
  777 California Avenue
  Palo Alto, California 94304

Features the discovery approach, multi-sensory and varied learning techniques, a careful progression from concrete materials to abstract concepts and periodic skills reinforcement. Shapes, sets, measurement and the meaning of numbers are among the concepts presented.

Math Series, Primary Kit — 1st-4th grade

- James E. Kuntz and Associates, Inc.
  P. O. Box 140
  McLean, Virginia 22101
- AGDP 101-P
- $110.00

Prepackaged kit includes: 10 games, 40 tests and rating charts, math operations for first through fourth grades, teacher's manual, and storage box.

Math Series, Elementary Kit — 1st-6th grade

- James E. Kuntz and Associates, Inc.
  P. O. Box 140
  McLean, Virginia 22101
- AGDP 101
- $150.00

Prepackaged kit includes: 10 games, 40 tests and rating charts, all

operational levels listed on back, teacher's manual, and storage box.

Math Series, Intermediate Kit — 4th-6th grade
- James E. Kutz and Associates, Inc.
  P. O. Box 140
  McLean, Virginia 22101
- AGDP 101-1
- $110.00

Prepackaged kit includes: 10 games, 40 tests and rating charts , math operations for fourth through eighth grades, teacher's manual, and storage box.

Countdown to New Math — preschool-5th grade
- Learning Arts
  P. O. Box 917
  Wichita, Kansas 67201
- $179.95

Focuses on those key concepts and skills upon which the elementary program is based. Cassette tapes (10), filmstrips (10), eleven foot number line, matrix boards (6), and card packs (4).

Time Learning — K-3rd grade
- The Learning Center, Inc.
  Princeton, New Jersey
- K107-10 (basic set for 10)
- $17.95

Set includes 10 plastic clocks with moveable hands and gears in the correct ratio. Each clock is provided with a set of removeable, plastic clock faces which permit the study of different concepts. Includes: Teacher's Manual, sample set of discovery sheets with answers, 10 sets of plastic stencils for drawing clock faces.

Judgements and Readiness — K-4th grade
- The Learning Center, Inc.
  Princeton, New Jersey
- $22.95 (basic set for 10)

This learning laboratory introduces children to properties of shape, size comparison, a definition of number and offers opportunity to become familiar with sets and number systems. Exploratory work done through a carefully structured series of lesson plans in the Teacher's Manual and discovery sheets stress personal judgement, thinking and individual work with materials.

Mathematics Laboratory Materials — 1st-3rd grade
- Learning Research Associates, Inc.
  1501 Broadway
  New York, New York 10036
- Write for order numbers and price list

Can be used as a basic program to introduce mathematical concepts

or as a supplement to the present primary math program. There are 649 lab sheets varied in visual appeal and length of task per page. Each child is provided with his own working materials and problems to solve on his level of comprehension and interest. His early work is based on the use of concrete materials such as the colored rods. The teacher helps him when help is desired.

Early Childhood Curriculum: Piaget Program — preschool-1st grade
. Learning Research Associates, Inc.
1501 Broadway
New York, New York 10036
. $292.45

A program designed to foster the development of logical thinking processes of 4-6 year olds. Based upon the research of Jean Piaget the 22 materials sets provide over 100 activities in classification, number measurement and space (conservation) and seriation. The teacher's guide provides both mental operations and appropriate language models for each set of activities.

Inventory for Continuous Progress — 4th-8th grade
. Learning Research Associates, Inc.
1501 Broadway
New York, New York 10036
. $98.00

The system developed by LRA is based on 5X8 margin-notched cards and is packaged as a classroom kit to provide an inexpensive, paper and pencil, pre-computer management tool for an individualized mathematics program that uses the leading mathematics series as source materials. Components: student performance objective cards, keyed to leading math series, prescriptive criterion tests, remedial resources keyed to tests, simple record system, immediate profile of student progress, prompt prescription for deficiencies.

Colorfax Addition and Subtraction Kit — 1st-3rd grade
. MacMillan Publishing Company, Inc.
200 F Brown Street
Riverside, New Jersey 08075
. 28537
. $47.70

This manipulative teaching aid provides ooportunities for discovery of underlying mathematical concepts and for practice leading to skillful and rapid calculation. The principal items are the 96 plasticized activity cards and the 300 plastic domino-like tiles of varying shape and color which represent number values from 1-10.

Math Skills Kits IIa-IId — 3rd-6th grade
. McCormick-Mathers Publishing Company
300 Pike Street
Cincinnati, Ohio 45202
. $54.00 per kit

The math skills kits fill the need for additional in-depth practice materials in mathematical computation at grade levels 3-6 and provide more adequately for the individual differences, abilities, and interests of the students. Includes: achievement tests, test answers, student record cards, a multi text reference guide and Teacher's Guide.

Mathematics Laboratory — 3rd-9th grade

- McCormick-Mathers Publishing Company
  300 Pike Street
  Cincinnati, Ohio 45202
- A9881-000-2
- $179.25

Designed to provide the individual student with practice in mathematical skills according to his own needs. Created for class participation with any basic mathematics program, individualized or ungraded situation, or small groups as practice supplement.

No Read Math Activities — all grades

- Midwest Publications Company, Inc.
  P. O. Box 129
  Troy, Michigan 48084
- Volume I-$29.00
  Volume II-$29.00

NR
Re

Provide one method of teaching math to students who are poor readers. No read math activities are in key sort card form following the same table of contents. The art work does not identify any particular school age so Volume I or Volume II can be used in junior or senior high if necessary.

A Cloudburst of Math Lab Experiments — 1st-8th grade

- Midwest Publications Company, Inc.
  P. O. Box 129
  Troy, Michigan 48084
- Write for price list

Has over 1100 experiments in eight different mathematical subject areas (fundamental operations; sets, numeration, number theory; fractions; probability and statistics; geometry; applications; measurement; enrichment) to be used with any textbook. It is available in either book or key-sort card form. The experiments cover both modern and traditional math.

Unifix Multi-base Assembly

- Mind/Matter Corporation
  P. O. Box 345
  Danbury, Connecticut 06810
- M803
- $44.00

The Unifix System utilizes the Unifix Cubes. These 3/4" plastic cubes can be interlocked, built up and used as units. It is a basic kit designed to provide sufficient material for a group of 6-8 children to assemble and explore multi-base structures up to 4 places in base 8. Includes: 530 Unifix Cubes, 70 terminal cubes, 20 assembly grids, 150 retaining frames, 36 indicators and a set of multibase notation cards, plus a guide.

Academic Game Development Kit — preschool-8th grade

- Motivational Research, Inc.
  P. O. Box 140
  McLean, Virginia 22101
- $110.00 Elementary School Kit
  $95.00 Pre-school Kit
  $110.00 Junior High Kit

The kit is a combination of diagnostic testing, rating and grouping procedures programmed materials, visual aids, instructional and reinforcement games. There are 10 game boards and 140 sets of question cards (10 questions each) which pose questions at 10 levels of difficulty in 17 math areas.

Plan Readiness Experience Program PREP Mini Pak Math — preschool-1st grade

- Plan, Inc.
  P. O. Box 3281
  1307 West Markham
  Little Rock, Arkansas 72203
- Write for prices and order numbers.

PREP-Plan's Readiness Experience Program is a comprehensive poly-sensory program for early childhood education. Major unit/topic cards and activity/lesson plan cards are included in the Mini-Pak. Each card lists all materials to be used and is a pre-planned lesson activity with full instructions which classify the lesson into 20-25 major areas of development.

Individual Mathematics: Algebra Skills Kit FF — 9th-10th grade

- Random House/Singer
  School Division
  201 East 50th Street
  New York, New York 10022
- 02187
- $64.95

An addition to the already established skill kits AA to DD. This kit allows students to work individually-at their own rate and on their own ability level to develop and reinforce basic algebra skills.

Individualized Mathematics: Drill and Practice Kits — 3rd-9th grade

- Randon House/Singer
  School Division
  201 East 50th Street
  New York, New York 10022
- 01584-3 (kit AA), 01586-X (kit BB),
  01588-6 (kit CC), 01590-8 (kit DD
- $59.95 each

The kit allows students to work individually at their own rate of speed and on their own ability level. Complete and self-contained, each kit consists of 500 different lessons divided into 20 blocks; 20 different pretests; 20 different posttests; 30 student profile cards, and Teacher's Guide. By varying the order of the blocks, the kits can be adapted to fit the sequence of topics in most elementary math programs.

Distar Arithmetic I and II — preschool-2nd grade

. Science Research Associates, Inc.
  259 East Erie Street
  Chicago, Illinois 60611
. Write for prices and order numbers.

Arithmetic I teaches addition, subtraction and algebraic addition and subtraction among other skills. Arithmetic II stresses independence in problem solving. Components: spiral bound presentation books, acetate page protector, group-progress indicator, Teacher's Manual. In Arithmetic I--4 decks of geometric figure cards, and eleven form boards. In Arithmetic II-10 student-size and 1 wall size multiplication charts and student workbooks. Both I and II have take-home sheets and workbooks.

Cross-number Puzzle Boxes — 4th-8th grade

. Science Research Associates, Inc.
  259 East Erie Street
  Chicago, Illinois 60611
. 3-3730
. $30.99

This supplemental program of four kits drills students in whole numbers, fractions, decimals and percents, and story problems, using intreguing crossword puzzle format. After initial introduction each student works independently and at his own pace--choosing h's own puzzle, solving it and recording his progress in his student record book. Puzzles graded in difficulty within each box.

Arithmetic Fact Kit — 3rd-12th grade Re

. Science Research Associates, Inc.
  259 East Erie Street
  Chicago, Illinois 60611
. 3-520
. $59.30

This supplementary program has fact cards that develop speed, accuracy, and mastery of addition, subtraction, multiplication and division. Test results direct students to the proper place in the kit. Mastery test card follows each group of fact cards and evaluates progress. Self-help cards present concepts, activities, and hints to help in mastery of facts.

Mathematics Involvement Program — K-6th grade NR

. Science Research Associates, Inc.
  259 East Erie Street
  Chicago, Illinois 60611
. 3-8150
. $154.00

This supplemental program is designed to develop concepts and skills through concrete and problem-solving experiences. Over 250 activity cards in seven levels of difficulty are organized by major math areas (numbers, geometry, measurement). Contains all necessary manipulative materials. Minimum reading makes it suitable for slow learners; average or better students benefit from individualized approach.

Math Applications Kit — 4th-8th grade

. Science Research Associates, Inc.
  259 East Eire Street
  Chicago, Illinois 60611
. 3-545
. $58.85

Students investigate problems using elementary math. There are 270 activity cards that reauire students to collect and use data to derive conclusions. A supp'ement to any basal math program and an outstanding addition to math laboratories or learning centers. Components: 270 activity cards, 10 reference cards, a Student Handbook, a Teacher's Handbook and an Almanac.

Activities in Mathematics — 6th-8th grade

. Scott Foresman and Company
  855 California Avenue
  Palo Alto, California 94304
. Write for order numbers and costs

This kit includes write-in pupil's books featuring activities and punchout manipulatives, teacher's edition with background material and teaching notes, and books of duplicating masters and overhead visuals. It incorporates games, puzzles and experiments into the program. Students measure blackboards, take their pulses, decode messages, and conduct experiments. With punch out grids, tops, meter sticks and many other devices to handle, students eagerly tackle abstract concepts.

Math Set: Measurement/Geometry — 3rd-8th grade

. Scott, Foresman and Company
  855 California Avenue
  Palo Alto, California 94304
. Write for order numbers and costs

Activity assignments lead students to discover basic mathematical ideas. Each student can work at his own interest and ability level with assignments printed on separate cards, grouped into units, numbered sequentially, and color coded for level of difficulty. Covers areas of measurement and geometry.

Fractions and Fractional Numbers/A Self-Instructional Multi-Sensory Approach — 1st-4th grade

. Special Education Materials Inc.
  484 South Broadway
  Yonkers, New York 10705
. S E 2210
. $60.00

A multi-media self instructional program which combines auditory, visual and kinesthetic experiences to reinforce the concept of fractions and fractional numbers. Program consists of 10 prerecorded lessons on cassette tapes; fraction discs to represent subject fractions, plastic trays to hold fraction pieces, and ten packs of 72 response sheets for each lesson.

Intermediate Math Programs — 3rd-6th grade
. Special Education Materials, Inc. — Re
484 South Broadway — S
Yonkers, New York 10705
. SE 2214
. $339.00

This program gives intermediate students much needed individualized instruction in basic math concepts and skills. The program may be used to upgrade the skills of slower students, provide reinforcement for average students, and to challenge able students. Consists of 40 tapes, 30 student response booklets for each tape, 3 copies of the Teacher's Manual, and a placement test kit.

Primary Math Skills Improvement Program — 1st-3rd grade
. Special Education Materials Inc.
484 South Broadway
Yonkers, New York 10705
. SE 2212
. $339.00

The program builds pupil proficiency in math. The series includes 40 prerecorded tapes, 30 student response booklets for each tape, 3 copies of the Teacher's Manual and a placement test kit. A variety of highly motivating individualized exercises reinforce and extend fundamental math concepts.

Understanding Math Concepts — 1st-6th grade
. Stanley Bowmar Company, Inc. — Re
Valhalla, New York 10595
. 98.77
. $19.95

Complete supplemtntal program which incorporates audio-visual techniques in a presentation designed to make basic mathematic ideas understandable. Especially effective as a remedial approach for students with problems in new math. Teacher's Manual, worksheets, and record.

Early Childhood Number Experiences — preschool-1st grade
. Trend Enterprises
P. O. Box 8623
White Bear Lake, Minnesota 55110
. T-423
. $36.25

This unit contains materials for developing basic number concepts such as: matching, sorting, grouping, one-to-one relationships, number recognition and sequence. Included are: 1 three-part puzzle, 2 lace-a-shape sets, 1 chart, 4 wipe-off sets, 2 bingo games and a punch-a shape set.

XI MANIPULATIVES

Sullivan Math Games — 1st-5th grade

. Behavioral Research Laboratories
  Box 577
  Palo Alto, California 94302
. 2675
. $49.95

1. Hainstock Blocks-manipulative device teaches number and numeral digits, etc.
2. Rithmetic-subtraction practice
3. Number-Place Steps-to read numbers, digits to 1000's, place value and zero
4. Abacus
5. Mathematical Checkers
6. BRL Equation Cards
7. Sullivan Math Cards
8. Number Sentence Game
9. Line Designs

Classroom Kit of Cuisenaire Rods — K-8th grade

. Cuisenaire Company of America, Inc.
  12 Church Street
  New Rochelle, New York 10805
. 10020
. $16.25

Each kit contains individual containers of rods for 24 pupils with instructional guides for each, a photo text guide, teacher's edition, and cuisenaire geoboard. Introduces addition, subtraction, multiplication, division, and fractions. Extensive use of cuisemaire rods, number lines, and workbook sheets.

Modern Mathematics Made Meaningful — preschool-5th grade Re

. Cuisenaire Company of America, Inc.
  12 Church Street
  New Rochelle, New York 10805
. 20010
. $12.50

Study kit for remedial or tutorial work with groups of 1-3 children. Includes teacher booklet (concepts, terminology and techniques of modern and traditional math), and 50 Topic Cards. Which provide step-by-step questions to help children understand mathematical relationships. Examples: number games, patterns, glossary and record "Number Song"

Opening Doors in Mathematics — 1st grade

. Cuisenaire Company of America, Inc.
  12 Church Street
  New Rochelle, New York 10805
. Write for order numbers and costs

Combination of manipulative models, varied worksheet devices, graphic devices. Introduces addition and its inverse as well as multiplication and its inverse during the first year.

Ordinal/Cardinal Puzzles — preschool-1st grade

. Developmental Learning Materials

7440 North Natchez Avenue
Niles, Illinois 60648 preschool-1st
. 204
. $4.00

Set of 11 puzzles, each divided into 3 pieces. The Puzzle placement is self-instructional for example, a puzzle piece related to "5" can fit only the other pieces of the 5 puzzle. However, the cut of the puzzle is not so obvious the student can rely on that alone to do the matching. $7\frac{1}{2}$ x $3\frac{1}{2}$" puzzle mounted on superboard and boxed with instructions.

Arithmetic Tube preschool-1st
. Dick Blick
P.O. Box 1267
Galesburg, Illinois 61401
. 7725
. $8.00

For demonstrating basic concrete number groups 1-9 and addition facts through 6 as well as inverse operations. Flash cards placed next to the clear tube show addition problems in the abstract and concrete. Pupil works each problem by placing beads and number separators in the tube.

Early Learning System-Magnetics preschool-K
shape set and shape cassettes
. EDL/McGraw Hill
California Branch Office
5610 Hollywood Boulevard
Hollywood, California 90028
. 312077
. $65.00

The shapes are sturdy, laminated and come in three colors. The various shapes include: circles, squares, rectangles, triangles, and diamonds-in two sizes; big and little. The shapes are magnetized so that they adhere to the shape cards on which they are stored. Children use them for concrete manipulative experiences while learning about shapes and other concepts.

Advanced Math Kit 3rd-7th grade
. ETA
159 West Kenzie Street
Chicago, Illinois 60610
. 124X
. $73.50

Contains demonstration and student materials for working with multibase and positive and negative numbers. Includes: counting and table board (for counting by units and multiplication and division), multibase math wheels, vertical multibase student frame 1-60 counting boards, zero centered wheel, tiplax binary demonstration frame

ETA Fraction Manipulatives 3rd-6th grade
. ETA
159 West Kinzie Street

Chicago, Illinois 60610
. 123X
. $67.45

Includes: set of fractions and equivalents, compact fraction books, fraction matching cards, inset placing tray (3 trays-5 units per tray; triangles, circles, squares), weight strip books, plastic weights.

ETA Geometry and Measurement Kit — 3rd-6th grade
. ETA
159 West Kinzie Street
Chicago, Illinois 60610
. 126X
. $49.50

Includes: a book on area with problems from line and shape measuring to finding areas of triangles; demonstration angles marker; cellograph geometrical display apparatus; 12" measure; yard measure, 5 foot tape; 3 sets each of introduction to measuring cards and geo-struct mathematical model construction outfit.

ETA Measurement and Capacity Kit — 1st-3rd grade
. ETA
159 West Kinzie Street
Chicago, Illinois 60610
. 125X
. $43.85

For group and individualized instruction. Includes: funnel, labels, plastic cubes, measuring jugs, liquid measures, 24-hour face clock.

Unifix Mathematics Kit — preschool-3rd grade
. ETA
159 West Kinzie Street
Chicago, Illinois 60610
. 120-4
. $95.00

For teaching basic mathematical concepts. The system is based on unit interlocking cubes which are used with a variety of racks, trays, boxes and holders. Also includes: number cards, inset pattern board, number association cards, scan window markers, 2-way bead stair, number pole, Teacher's Manual, and more.

Manipulative Aids for Modern School Mathematics — 1st-3rd grade
. Houghton Mifflin
777 California Avenue
Palo Alto, California 94304
. 1-4419
. $14.25

Colorful, versatile and precise, the manipulative aids help pupils discover basic math. Materials consist of geometric shapes, colored centimeter rods, an open-end abacus kit, a number line ruler, and centimeter grid paper. A full color Teacher's Guide suggests numerous and varied activities to be used with any modern math program.

Teaching-Learning Kit — preschool-3rd grade
- Houghton Mifflin
  777 California Avenue
  Palo Alto, California 94304
- I-14483
- $26.16

The Teaching-Learning Kit consists of a board, a set of display objects, and a Teacher's Guide. There are 376 objects including numerals, symbols, placeholders, geometric shapes, number rods, abacus rods, abacus beads, clock hands, and elements for sets (apples, etc.) and Teacher's Guide.

Introductory Geometry — K-8th grade
- The Learning Center, Inc.
  Princeton, New Jersey
- K140-10 (basic set for 10)
- $18.95

The laboratory permits even the youngest child to experiment with some of the tools and ideas of geometry. Includes: compas, plastic geometric shapes, ruler and straight edge.

Judgements and Readiness — preschool-1st grade
- The Learning Center, Inc.
  Princeton, New Jersey
- $22.95 (basic set for 10)

This learning laboratory introduces children to properties of shape, size and comparison, a definition of numbers and offers opprotunity to become familiar with sets and number systems. Exploratory work done through a carefully structured series of lesson plans in the Teacher's Guide and discovery sheets stress personal judgment, thinking and individual work with materials.

Math Mates — 1st-6th grade
- Learning Research Associates, Inc.
  1501 Broadway
  New York, New York 10036
- Write for prices and order number.

Math Mates are sets of durable activity cards illustrated in color and black and white, and designed to be used with the following math manipulatives: Math Balance, attribute blocks, abacus, 100 Number Board, Geostrips, Clinometer, primary shapes, and mosaic shapes. Each set contains 10 cards with each card listing a specific objective on goal and providing numerous motivational activities.

Pattern Board — K-8th grade
- The Learning Center, Inc.
  Princeton, New Jersey
- K102-10 (basic set for 10)
- $16.95

The pattern board gives children opportunities to feel and see

number patterns, numbers in first and second decades, through 20 are explored linearly and in grouped patterns with 1 to 10. Addition and subtraction are revealed in terms of doubles and near doubles, and in grouping and regrouping of number patterns. A 40 page manual with lesson plans is included.

Simple Fractions — K-8th grade

- The Learning Center, Inc.
  Princeton, New Jersey
- K115-10 (basic set for 10)
- $15.95

A multiplicity of shapes and fractional divisions is available in this learning laboratory. It includes a Teacher's Guide with lesson plans. Each group of children is given different fraction plastic trays; some are provided with 3" rubber pies in wholes, halves, thirds, sixths and twelfths; others with squares, linear strips, and oddly shaped fractions.

Time Learning — K-3rd grade

- The Learning Center, Inc.
  Princeton, New Jersey
- K107-10 (basic set of 10)
- $17.95

Set includes 10 plastic clocks with moveable hands and gears in the correct ration. Each clock is provided with a set of removable plastic clock faces which permit the study of different concepts. Includes: Teacher's Manual, sample set of discovery sheets with answers, plus 10 sets of plastic stencils for drawing clock faces.

Unifix Cubes and related structural material — K-4th grade

- Learning Research Assoc., Inc.
  1501 Broadway
  New York, New York 10036
- M1900
- &64.50

Classroom starter set includes interlocking cubes, number indicators, pattern boards, number tray valve , valve cards, units number cards, notation and counting ladder, building to 100 board, 5, 10 and units trays.

Colorfax Addition and Subtraction Kit — 1st-6th grade

- MacMillan Publishing Company, Inc.
  200 F Brown Street
  Riverside, New Jersey 08075
- 28537
- $47.70

This manipulative teaching aid provides opportunities for discovery of underlying mathematiczl concepts and for practice leading to skillful and rapid calculation. The principal items are the 96 plastic activity cards and the 300 plastic domino-like tiles of varying shapes and colors which represent number values from 1-10.

Visionetics-Geometry and Algebra — 4th-8th grade

. Mafex Associates, Inc.
  111 Baron Avenue, Box 519
  Johnstown, Penn. 15907
. Write for prices

Curiculum oriented learning aids designed to satisfy the child's needs for exploration and discovery. Includes: Geometric Plan Figures, Pythagorean Theorem, Area of Parallelogram and Triangle Area of Trapezoid, Area of Circle, Pi Determinant, Geometric Solids, Discovery Geometry, Geoboard Kits, Geometric String Pictures.

Visionetics-Mathematical Operations

. Mafex Associates, Inc.
  111 Brown Avenue, Box 519
  Johnstown, Penn. 15907
. Write for prices

Ciriculum oriented learning aids designed to satisfy the child's needs for exploration and discovery. Includes: Moveable disc number line, disc number line, sliding number line, multiplication board, Napier's Rods, fractional parts, addition facts and fraction facts, design-a-matics-, and arithmograms.

Visionetics-Measurements — 1st- 3rd grade

. Mafex Associates, Inc.
  111 Brown Avenue, Box 519
  Johnstown, Penn. 15907
. Write for price list

Curiculum oriented learning aids designed to satisfy the child's needs for exploration and discovery. Includes: manipulative clock, primary clock face, combination clock, quick conversion units, rulers (standard and new math), Navigation Kit; latitude finder, longitude computer, plotting board, chronometer.

Visionetics-Number Systems — 1st-6th grade

. Mafax Associates, Inc.
  111 Brown Avenue, Box 519
  Johnstown, Penn. 15907
. Write for price list

Curriculum oriented learning aids designed to satisfy the child's need for exploration and discovery. Includes: New Math Symbols, Binary Selection Cards, Logical Riddle Fractions, Base conversion rulers, base system fact cards, binary multiplier and divider, binary slide rule, binary pattern cards, new math slide rulers.

Unifix Early Childhood Kit — preschool-2nd grade

. Mind/Matter corporation
  P. O. Box 345
  Danbury Conn. 06810
. M800
. $53.00

The Unifix system utilizes the Unifix Cubes. These 3/4" plastic

cubes can be interlocked, built-up, and used as units. Recommended for use with groups of 6 children. 500 Unifix Cubes (50 each of 10 colors), 2 1-10 stairs, 2 1-10 vavle boats, 2 sets number indicators, 2 10x10 number trays, 1 1-10 inset domino pattern board, 1 1-10 inset two pattern boards, 1 1-106 number track, 2 1-10's and units trays, 1 Teacher's Manual.

Unifix Math Lab Kit — 2nd-5th grade

- Mind/Matter Corporation
  P.O. Box 345
  Danbury, Conn. 06810
- M801
- $44.00

The Unifix set utilizes the Unifix Cubes. These 3/4" plastic cubes can be interlocked, built up and used as units. Includes: 500 Unifix Cubes (50 each of 10 colors), 20 sheets grid material for multibase structures, 2 century 1-100 counting and multiplication boards, 100 yellow scan marker windows, 1-100 number track, set 1-100 number tablets, Teacher's Manual, group work guide, multibase structure guide.

Unifix Multibase Assembly Kit — 3rd-6th grade

- Mind/Matter Corporation
  P.O.Box 345
  Danbury, Conn. 06810
- M803
- $44.00

The Unifix System utilizes the Unifix Cubes. These 3/4" plastic cubes can be interlocked, built up and used as units. This is a basic kit designed to provide sufficient material for a group of 6-8 children to assemble and explore multibase structures up to 4 places in base 8. Includes: 530 Unifix Cubes, 70 terminal cubes, 20 assembly grids, 150 retaining frames, 36 indicators and a set of multibase notion cards, and a Teacher's Guide.

Mathematical Shapes — 1st-8th grade

- Nasco
  Fort Atkinson, Wisconsin 53538
- Write for prices and order numbers

Explains geometric wire gorms and patterns, large geometric plastic forms, Big Bunyan Blocks, geometric shapes and solids, 3-D geometrical forms, number relation blocks, design blocks, polyhedron models, plane geometric figures, Hubbard Math Models.

XII SUPPLEMENTAL TEXTS AND READERS

Approach to Numbers — 1st-3rd grade

- Mafex Associates, Inc.
  111 Brown Avenue, Box 519
  Johnstown, Penn. 15907
- 90¢

A series of four readers that teach <u>abstract number language</u>. A new approach to number language for primary school children based on the work of Piaget, which lays a basis of understanding for language and structural math . The child is led to a real grasp of size, and number.

Count Fingers, Count Toes — kindergarten

- T.S. Denison and Company, Inc.
  5100 West 82nd Street
  Minneapolis, Minnesota 55437
- 513-00074-7
- $4.95

- These are $8\frac{1}{2}$ x 11" line drawing illustrations, paper binding, 38 pages.
- Introduction to the dynamics of number systems. Rhymes and easy style.

Learning Programs — 3rd-6th grade (P)

- Coronet Films
  65East South Water Street.
  Chicago, Illinois 60601
- Write for prices

Three separate programs: Understanding Problems in Arithmetic, Intorducing the Metric System, and Number Bases, and Binary Arithmetic.

Jr./Sr. High Mathematics TEMAC — 9th-12th grade (P)

- Encyclopedia Britannica
  Educational Corporation
  425 North Michigan Avenue
  Chicago, Illinois 60611
- For individual order numbers and costs write company

A collection of programmed texts, particularly suited to learning both the skills and content of mathematics. Designed for use in conjunction with regular teaching materials: algebra, basic math, trigonometry, calculus, geometry.

Mathex

- Encyclopedia Britannica Educational Corporation — 1st-8th grade
  425 North Michigan Avenue
  Chicago, Illinois 60611
- Primary Set No. 66001
  Junior Set 66002
- $60.50 per set

A versatile, student-activ ty oriented mathematics program providing materials to supplement a basal text book program. Includes resource book for the teacher, packages of pupil page units and an introduction booklet.

Whole Numbers and Numerals — 1st-3rd grade

- Encyclopedia Britannica Educational Corporation
  425 North Michigan Avenue
  Chicago, Illinois 60611
- 50266-Text
  50262 Teacher's Manual
- $8.50 text
  $1.25 Teacher's Manual

A unit course for developing the arithmetic of whole numbers which stresses the basic properties of whole numbers and of positional systems of numeration. Base 10, base 7 and other base systems are developed.

Arithmetic of the Whole Number — 6th-8th grade (P)

- Encyclopedia Britannica Educat onal Corporation
  425 North Michigan Avenue
  Chicago, Illinois 60611
- 50234 text
  50236 Teacher's Manual
- $8.50 text
  $.75 Teacher's Manual

A programmed unit course for teaching the four basic arithmetic operations with whole numbers at 6th to 8th grade level. Rules are not merely stated; arithmetic techniques are developed step by step from basic definitions.

Elementary Arithmetic — 1st-3rd grade (P)

- Grolier Educational Corporation
  575 Lexington Avenue
  New York, New York 10022
- Tm 301, Tm 302, Tm 501, Tm 502, TT 503
- $7.50, $10.00, $10.00, $15.00, $10.00

A series of 6 books, all programmed for independent work covering the topics of time telling, introduction to numbers, addition and subtraction, multiplication and division, decimal numbers, and fractions.

Intermediate Mathematics — 3rd-6th grade (P)

- Grolier Educational Corporation
  575 Lexington Avenue
  New York, New York 10022
- Tm 301, Tm 302
- $7.50, $10.00

Series of 2 books programmed for individual instruction and independent work. Covers introduction to modern math and modern math; properties of number system

Secondary Mathematics — 9th-12th grade (P)

- Grolier Educational Corporation
  575 Lexington Avenue
  New York, New York 10022
- Tm 501, Tm 502, TT 503
- $10.00, $15.00, $10.00

Series of 3 books programmed for independent study. Covers fundamentals of algebra, Fundamentals of Algebra II, Algebra Refresher.

Modern Practice Books in Arithmetic — 1st-7th grade

- Steck-Vaughn Company
  P.O. Box 2028
  Austin, Texas 78767
- Write for costs

Designed to supplement textbooks utilizing the traditional math approach. Lessons in each book consist of mixed and cumulative drill material with clear-cut directions and ample space for the pupil's work.

Houghton Mifflin Mathematics — 7th-12th grade (S)
- Enrichment Series
  Houghton Mifflin
  777 California Avenue
  Palo Alto, California 94304
- Write for order number and prices.

Designed to add depth, scope and flexibility to any modern mathe program, this new series explores some of the most fascinating topics in math. Emphasis is on discovery, on methods of mathematical investigation, and on the nature and objectives of mathe itself.

Modern Mathematics for Achievement — 7th-12th grade (NR, Re)
- Houghton Mifflin
  777 California Avenue
  Palo Alto, California 94304
- Write for order numbers and prices

Two one-year general math texts for low achievers, divided into 8 paperbound booklets emphasizing practical concepts and skills. It is clearly related to both vocational and everyday needs. The approach is inductive, with a minimum amount of reading material, frequent change of pace, a built in testing program and many day-to-day exercises that assure success to motivate low achievers.

The Random House Mathematics Program — K-6th grade
- Random House/Singer
  School Division
  321 East 50th Street
  New York, New York 10022
- Write for price list and order numbers

Helps to create a math lab atmosphere systematically and easily. Provides strong skill development and contemporary content. Develops problem-solving techniques in a multi-level way; a way which recognizes the link between problem solving and reading skills.

Franklin Mathematics Series — 1st-8th grade
- Lyons and Carnahan
  Educational Division, Meridith Corporation
  407 East 25th Street
  Chicago, Illinois 60616
- Write for price list

This math series is filled with problems that draw on imagination and common sense. The books take students through a whole fascinating series of activities, projects, puzzles, and games. Sample topics include: learn to fold, mirror magic, patterns and puzzles in math.

Understanding Modern Mathematics — 7th-12th grade (P)
- Macmillan Publishing Company, Inc.
  200 F Brown Street
  Riverside, New Jersey 08075
- Write for costs and numbers

This is a series of programmed texts. Throughout each program in the series the student proceeds at his own pace. Each program is complete initself and contains between 400 and 500 instructional frames, as well as exercises and discussion questions. The programs are in two colors and are fully illustrated. Includes: basis and numerals, factors and primes, modular systems, number sentences, points, lines and planes, and probability.

XIII TEACHING MACHINES

Self Instructional Mathematics — 1st-3rd grade

- Electronic Futures, Inc.
  57 Dodge Avenue
  North Haven, Connecticut 06473
- SIBM

Audio flashcards are structured programs presented in a multi-sensory format for self-instructional or teacher directed learning activity. This program encompasses the full complement of skills, concepts and abstract principles encountered in the basic mathematics curriculum. To be used with audio-flash card reader.

Basic Mathematics: Tutorgram — K-1st grade

- ERCA
  Iron Ridge, Wisconsin 53035
- 3C
- Tutorgram $24.50
  Basic math program $8.50

A learning machine which lights up and rings a buzzer with a correct response is the basic format. This program provides basic math concepts.

Mathematics: Tutorgram — 2nd grade

- ERCA
  Iron Ridge, Wisconsin 53035
- 6B
- $24.50 tutorgram
  $8.50 math program

A learning machine which lights up and rings a buzzer with a correct response is the basic format. The program provides reinforcement and drill of math concepts in computation, math sentences, and an expansion of the earlier concepts found in the basic math program.

Countdown — 1st-3rd grade

- Individualized Instruction Inc.
  P.O. Box 25308
  1901 North Walnut
  Oklahoma City, Oklahoma 73125
- $198.00

A supplemental modern mathe program utilizing individualized cassettes. A blending of content and technique from both traditional and modern math. Covers: number concepts, addition, subtraction, multiplication and division. Requires verbal responses from student through use of pacer which gives feedback.

Intermediate Mathematics — 3rd-6th grade

- Study Scope Company
  319 East Front
  Tyler, Texas 75701
- 40000
- $79.50

Study scope; a plastic cylinder that has 2 transparent windows, one presents a problem the other the solution. Set includes; 15 study scopes, 6 levels of programs, 6 individual study scribes, 30 pupil progress reports, Teacher's Manual. Individualized program topics: multiplication, division, place value, fractions, decimals, geometric figures, percents, ratios.

Primary Mathematics: Study Scope — 1st-3rd grade

- Study Scope Company
  319 East Front
  Tyler, Texas 75701
- 30000
- $79.50

Study scope; a plastic cylinder that has 2 transparent windows, one presents a problem and the other the solution. Set includes: 15 study scopes, 6 levels of programs, 6 individual study scribes, 30 pupil progress reports and Teacher's Manual. Meant as a supplement to traditional or modern math program. Allows individual work.

XIV TEACHER REFERENCES

Experiencing Mathematics — 1st-3rd grade

- Macmillan Publishing Company, Inc.
  200F Brown Street
  Riverside, New Jersey 08075
- 13656
- $4.95

This easy to use guide helps teachers deal effectively with the math-lab approach and math-lab experiences.

Cheap Math Lab Equipment — 1st-6th grade

- Midwest Publications, Inc.
  P.O. Box 129
  Troy, Michigan 48084
- $3.00

The book tells how to make 25 pieces of equipment and how to use them in 150 activities. The equipment are simple enough to construct that most of them can be made by the students.

Creative Experiments in Algebra — 6th-10th grade

- Midwest Publications, Inc.
  P.O. Box 129
  Troy, Michigan 48084
- $1.50

Consists of 40 experiments designed to supplement standard texts.

It is so organized that it lends itself to small group, individual student, or total classroom instruction. The book leans very heavily toward the instructional philosophy that would be characterized as discovery oriented.

Creative Geometry Experiments — 4th-11th grade
- Midwest Publications, Inc.
  P.O. Box 129
  Troy, Michigan 48084
- $1.50

28 experiments on a variety of geometry topics, including some well-known puzzles with directions for building them. These materials present situations within the environment that can illustrate mathematical concepts.

The Fabric of Mathematics — 1st-6th grade
- Midwest Publications, Inc.
  P.O. Box 129
  Troy, Michigan 48084
- $12.50

A resource book for teachers interested in individualizing math instruction. Suggestions for a multi-media approach are carefully organized. Includes: number, numeration, measurement, geometry, sets and logic, manipulatives, games, activities, visuals, bibliographies, references for teachers, addresses of publishers.

The Laboratory Approach to Mathematics
- Science Research Associates, Inc.
  259 East Erie Street
  Chicago, Illinois 60611
- 3-4790
- $5.40

This book explains the laboratory method in mathematics. It tells how this approach relates learning to experience, creates an atmosphere conducive to learning and to progress at his own rate. Provides explicit guidelines for planning and presenting laboratory investigations and directions for organizing students and materials. Describes methods of evaluating student progress and the effectiveness of the laboratory methods.

XV TRANSPARENCIES AND OVERHEAD VISUALS

Harbrace Mathematics Instructional Slides — 1st-5th grade
- Harcourt Brace Javanovich, Inc.
  757 Third Avenue
  New York, New York 10017
- 0-15-396564-9
- $385.00

A slide program designed to introduce, review, or reinforce mathematical concepts. 700 full-color 35 mm slides presenting addition, subtraction, multiplication, division, measurement, geometry, graphs,

rational numbers, problem solving. Includes Teacher's Handbook. Normal classroom lighting is maintained, can project images on board so pupils can write directly on the image.

Algebra Visuals I — 5th-9th grade

- Houghton Mifflin
  777 California Avenue
  Palo Alto, California 94304
- 2-77379
- $79.50

Set of overhead visuals to reinforce basic subject matter. Introduces and demonstrates difficult concepts.

Geometry Visuals — 7th-12th grade

- Houghton Mifflin
  777 California Avenue
  Palo Alto, California 94304
- 2-28758
- $84.00

Set of colorful overhead visuals for presenting abstract concepts of plane, coordinate and space geometry.

Geometry Transparencies — 4th-12th grade

- Nasco
  Fort Attinson, Wisconsin 53538
- Write for prices and order numbers

The transparencies are well done with detailed, accurately scaled drawings covering the topics of forms, binomial expansion, coordinate geometry, points, lines and planes, area relationship, parallelograms and parallelepiped, pythegorean relation, lines, arcs and circles, similar triangles, theorems of concurring and loci.

Visualizing Elementary Mathematics — 1st-4th grade

- Random House/Singer
  School Division
  201 East 50th Street
  New York, New York 10022
- 01537-1(kit A), 01542-8 (kit B),
  01547-a (kit C), 01552-5 (kit D)
- $66.00 (kit A), $153.00 (kit B)
  $5.46 (kit C), $5.46 (kit D)

Kit A for overhead projector (k-2)
Kit B for overhead projector (k-8)
Kit C for flannel board (k-8) sets and numbers
Kit D for flannel board (k-8) geometric shapes and fractions

Essco Educational Supply — 1st-3rd grade

- 2823-25 East Gage Avenue
  Huntington Park, California 90255

Learning Media Corporation — K-9th grade

- 231 North 63rd Street
  Philadelphia, Pennsylvania

Mafex Media Aids — K-4th grade
. 111 Barron Avenue
Johnstown, Pennsylvania 15906

Milliken Publishing Company — 3rd-12th grade
. 611 Olive Street
St. Louis, Missouri 63101

Stanley Bowmar Company, Inc. — 1st-6th grade
. Valhalla, New York 10595

3M Comapny — K-12th grade
. 3M Center
St. Paul, Minn 55101

Tweedy — 1st-6th grade
. 208 Hollywood Avenue
East Orange, New Jersey 07018

Valient IMC — K-12th grade
. 237 Washington Avenue
Hackinsack, New Jersey 07602

XVI WORKBOOKS AND WORKSHEETS

Three Track Arithmetic Workbook — 3rd-6th grade
. Acadia Press, Inc. — Re
1144 South Main Avenue — S
Scranton, Penn. 18504
. $1.32 list/99C net

Provides for relearning and practice at various levels of difficulty and achievement, to help solve the problem of individual differences.
Track 1: practice meaning and application of the fundamentals of math.
Track 2: continuation of the material presented in 1st track.
Track 3: challenging material for superior pupils. More difficult and newer applications of fundamentals.

Skills in Basic Mathematics — 7th-12th grade
. Appleton Century Crofts
440 Park Avenue South
New York, New York 10016
. Write for order numbers

Text, write and see for immediate reinforcement. Cassettes available in English and Spanish. 48 lessons covering A, B, C, D, E.
Fundamental Operations
Understanding Fractions
Using Fractions
Understanding Decimals
Decimals, Percents and Ratios

Arithmetic-Handy Pack — 1st-3rd grade
. Fern Tripp
2035 East Sierra Way
Dinuba, California 93618
. $ 2.50

Contains eight pieces: one calendar pattern and seven pads of 20 to 80 sheets each for use as practice in teaching the calendar, U.S. money, check writing, multiplication tables, useful formulas and important measures. One pack contains enough sheets in each pad for one practice for each student in a class of 18.

Supermarket — 1st-3rd grade

- Fern Tripp
  2035 East Sierra Way
  Dinuba, California 93618
- $2.20 student copy
  $2.40 teacher's copy

This unit covers story problems in grocery buying; U.S. money; change making; check writing; sales slip writing; simple functional basic arithmetic facts and processes used in grocery buying; use of weights, ounces, pounds and dozen; number words frequently used and can size and servings.

Experiments in Mathematics (third stage) — 7th-12th grade

- Houghton Mifflin
  777 California Avenue
  Palo Alto, California 94304
- 2-43725, 2-43729, 2-43733
- $1.44 each

Paperbound books intended for supplemental use in mathematics classes where a laboratory approach is desired. Especially appropriate in junior high and general math at high school level.

Mathematics in the Making — 3rd-8th grade

- Houghton Mifflin
  777 California Avenue
  Palo Alto, California 94304
- 1-03030-1-03041
- $1.50 each

Series of 12 two-color paperbound booklets with a variety of laboratory-oriented enrichment activities. Each booklet develops a particular topic through concise statements and questions, and an abundance of large, clear illustrations. Examples: pattern, area and angles, cubes, networks, graphs, statistics, sets and relations.

Number Readiness — preschool-K

- Mafex Associates, Inc.
  111 Baron Avenue, Box 519
  Johnstown, Penn. 15907
- $1.75 each

There are plenty of practical exercises on every page, all systematically planned to develop powers of observation and learning. Some concepts presented are size relationships, surface textures and planes, calendar, distances, adding and taking away.

Skill in Basic Mathematics — 7th-9th grade
Re

- New Century Publications
  Educational Division, Meredith Corporation
  distributed by Appleton-Century-Crofts
  440 Park Avenue, South
  New York, New York 10016
- $4.65 per unit

This series is designed for students entering junior high school who have not yet mastered basic concepts and skills in major areas of the math curriculum. It uses simple vocabulary in word problems with minimal use of technical terms explaining concepts by example rather than in verbal papagraphs and provides extensive practice in each skill area.

Practice for Modern Mathematics — 1st-6th grade

- Steck-Vaughn Company
  Box 2028
  Austin, Texas 78767
- 99¢ per book

The workbooks are filled with puzzles and number games with colorful illustrations that add to mastering the skills of modern mathematics. Each workbook is correlated at grade level with the most widely accepted modern mathematics textbooks today. Exercises are included to develop theory, properties of real numbers, and topics in geometry.

Practice for Modern Mathematics — 4th-6th grade

- Steak-Vaughn Company
  Vaughn Building
  P.O. Box 2028
  Austin, Texas 78767
- Write for prices and order numbers

This series of student workbooks, is designed to supplement most modern mathematics textbooks by providing meaningful exercises in fundamental operations and number relationships. The material within each book is correlated at grade level with the most widely accepted mathematics textbooks currently used in public schools.

Arithmetic Concept Plaques — K-3rd grade

- Webster/McGraw Hill
  8171 Redwood Highway
  Novato, California 94947
- Write for prices and order numbers

These two sets of polystyrene plaques and accompanying fourcolor workbooks represent a unique kinesthetic approach to teaching basic addition and subtraction. Children color in numbers and dots with special nontoxic washable pencils-a perfect way to learn numeral forms and concepts before writing them on paper. Of special help to students with learning difficulties.

Exploring Mathematics on Your Own — 5th-9th grade
S

- Webster/McGraw Hill

8171 Redwood Highway
Novato, California 94947
. 07-023459-0
. $22.50

Mathematical enrichment booklets dealing with many forms of modern mathematics. For self study or for use with better math students. Complete set of 18: sets, sentences and operations, topology, number pattern, statistics, graphing, vectors, curves in space, logic.

Programmed Math — 7th-up
. Webster/McGraw Hill — Re
8171 Redwood Highway — P
Novato, California 94947
. Write for prices and order numbers

A structured series for students who need help with fundamental math operations. Books 1-8 and the corresponding word problem books constitute a complete program in basic skills. Books 9-15 offer a wide range of applied math topics particularly suitable for remedial work at grades 7 and up.